Program Announcements (PA'S)
RESEARCH ON INFECTIOUS AGENTS IN THE ETIOLOGY OF RHEUMATOID ARTHRITIS

NIH GUIDE - Volume 17, Number 7, February 26, 1988

PA NUMBER: PA-88-03

P.T. 34; K.W. 0715010, 0715125, 0715170, 0755030

National Institute of Arthritis and Musculoskeletal and Skin Diseases

BACKGROUND INFORMATION

Research into the causes of various rheumatic diseases is entering into a period of increased productivity with the identification of specific immunogenetic determinants in many diseases and disordered immunoregulation in others. The concepts generated by these new findings, however, have not led to a complete explanation of the etiopathogenesis of any of these diseases.

The National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) has reported several research advances on rheumatoid arthritis. Through recombinant DNA biotechnology, two new DNA fragments have been discovered that pinpoint the exact site on the chromosomes where susceptibility to rheumatoid arthritis resides and the gene for rheumatoid factor has been successfully cloned. Concomitantly, there is great current interest in an initiating role for one or another infectious agent in rheumatoid arthritis and many of the other rheumatic diseases. That Lyme arthritis is caused by spirochetal bacteria has further energized this interest. Bacterial cell wall components containing peptiodoglycans have recently been proposed as agents responsible for some cases of chronic arthritis. In rheumatoid arthritis, from recent research, candidate agents of considerable interest include mycoplasma, EB virus, retrovirus, and DNA parvovirus. Powerful methods and new tools have been developed that can be used to detect and characterize microorganisms in joints and other tissues. Klebsiella, Yersinia, Chlamydia, Shigella, and Salmonella bacteria have all been implicated in the spondyloarthropathies (ankylosing spondylitis, Reiter's syndrome, et al.).

RESEARCH GOALS AND SCOPE

Great interest exists in pursuing the theory of an infectious cause for rheumatoid arthritis and the search for specific infectious agents as initiators of this major crippler among the rheumatic diseases should be intensified. The NIAMS is

eager to fund a new research initiative in this area. Improvements in culture techniques, the isolation of microorganisms, and antigen recognition in tissues will help to provide new methodologies with which to determine the role that microorganisms may play in triggering rheumatoid arthritis.

The current available knowledge and technical resources applicable to a possible infectious etiology of rheumatoid arthritis requires the interrelation of concepts that involve the host and an inciting agent. These might include genetics, the immune response and subtle differences in the response of susceptible and resistant hosts. As a result, the interdisciplinary nature of these investigations warrants overlapping expertise and important interfacing in a number of areas and scientific disciplines. These include bacteriology, virology, immunology, pathology, molecular biology, biochemistry, and tissue culture biomethodology, as they apply to the exploration of infectious agents in the etiology and pathogenesis of rheumatoid arthritis.

The research areas and disciplines listed are not in any intended order of established priority. Research activities need not be limited to the proposed topics cited but should be directed toward the development of new information and advanced concepts in the infectious etiology and pathogenesis of rheumatoid arthritis and may also include work with infectious agents in related rheumatic diseases.

MECHANISM OF SUPPORT

The support mechanism for this program will be the traditional investigator-initiated research project grant in which the applicant will plan, direct, and carry out the research program. The project period during which the research will be conducted should adequately reflect the time required to accomplish the stated goals and be consistent with the existing policy for grant support.

Applications will be selected for funding based primarily on scientific and technical merit and potential scientific contributions consistent with the terms of this announcement.

Awards will be made on an annual basis to applicants who succeed in the national competition for funds available to the research programs of the Institute. Support will be provided for up to five years (renewable for subsequent periods) subject to the availability of funds and progress achieved. Since a variety of approaches would represent valid responses to this solicitation, it is anticipated that there will be a range of costs among individual grants awarded. With respect to post-award administration, the current policies and requirements that govern the regular research grant programs of the NIH will prevail.

Research grant applications may be submitted by non-profit organizations and institutions, units of state or local government, for profit organizations, and eligible agencies of federal government.

REVIEW PROCEDURES AND CRITERIA

Applications in response to this solicitation will be received by the National Institutes of Health, Division of Research Grants (DRG), referred to an appropriate Initial Review Group for scientific merit review, and assigned to the NIAMS for council review and potential funding, unless programmatic considerations indicate more appropriate assignment to another Institute, such as the NIAID. Applications considered unresponsive may be withdrawn or considered for the regular grant program after consultation with the applicant. Simultaneous submission of identical applications will not be permitted. These decisions will be governed by the normal DRG Referral Guidelines.

METHOD OF APPLYING

Applications should be submitted on form PHS 398, which is available in the grants and contracts business office or office of sponsored research at most academic and research institutions or from the Office of Grants Inquiries, Division of Research Grants (DRG), NIH. Space #2 on the first page of the form should be used to indicate the title of the Program Announcement. The original and six copies of the application should be sent or delivered to:

Application Receipt Office
Division of Research Grants
National Institutes of Health
Westwood Building, Room 240
Bethesda, Maryland 20892**

The initial deadline date is: June 1, 1988. Applications will be welcomed in this area in the future and will be accepted in accordance with the usual NIH receipt dates for new applications.

IDENTIFICATION OF CONTACT POINTS

General information and more detailed information about application procedures may be obtained from:

Lawrence M. Petrucelli, Ph.D.
Arthritis Program Director
National Institute of Arthritis and
Musculoskeletal and Skin Diseases
Westwood Building, Room 405
Bethesda, Maryland 20892